Edinburgh Research Explorer

Indigenous lands and health access

Indigenous lands and health access: The influence of a sense of place on disparities in post-stroke recovery in Taiwan

Zih-Yong Liao [a,*], Susanne Kean [b], Elaine Haycock-Stuart [b]

[a] *National Center for Geriatrics and Welfare Research, National Health Research Institutes, Taiwan*
[b] *Nursing Studies, School of Health in Social Science, The University of Edinburgh, UK*

ABSTRACT

Despite many countries having policies and systems for universal healthcare coverage, health disparity persists, with significant variations in disease prevalence and life expectancy between different groups of people. This focused ethnography explored the post-stroke recovery of Indigenous and non-Indigenous populations in three geographical areas in Taiwan. Forty-eight observations and 24 interviews were carried out with 12 dyads of stroke survivors and family caregivers, revealing their varied experiences of healthcare. Findings indicate that repeatedly engaging in social activities in the same place increases stroke survivors' attachment to the environment, facilitating their reintegration into the community and improving wellbeing following stroke. The significance of 'place' in post-stroke life and healthcare access is particularly salient for Indigenous people's recovery. Indigenous people tend to employ cultural symbols, such as Indigenous languages and kinship ties, to define and interpret their surrounding environment and identity. Indigenous people residing within or close to their own native communities make better recoveries than those based in urban settings, who are attached to and yet located away from their native lands. A sense of place contributes to identity, while loss of it leads to invisibility and healthcare inaccessibility. To promote equitable healthcare access, future policymaking and care practices should address the environmental and cultural geography and structural barriers that impede the connection between minority groups and the mainstream community healthcare system. The study findings suggest extending welfare resources beyond Indigenous administrative regions and establishing partnerships between Indigenous organisations and the mainstream healthcare system. Leveraging Indigenous people's attachment to cultural symbols and increasing healthcare facilities staffed with Indigenous healthcare workers could help ease structural barriers, maintain identifiable Indigenous beneficiaries and increase entry points into the mainstream healthcare system.

1. Introduction

Health disparity is a globally observed social phenomenon that adversely affects disadvantaged groups, including low-income, immigrant and Indigenous populations; this disparity increases with age (Brown, 2018; Goodman et al., 2019). The disparity is evident within the Taiwanese community, reflected in a higher prevalence of metabolic syndrome (Lin et al., 2021) and a shorter life expectancy for Indigenous people by approximately eight years compared to the general population (Ministry of the Interior, 2019). In Taiwan, there are 16 officially recognised Indigenous groups, constituting approximately 2.51% of Taiwan's 23 million people (Ministry of the Interior, 2023). According to the United Nations (2018), ethnic minorities are typically smaller in number and non-dominant, possessing distinct cultural or linguistic characteristics for preservation. While there is no universally accepted definition to distinguish Indigenous peoples or ethnic minorities, the Indigenous Taiwanese have gradually become ethnic minorities over four centuries due to pacification, inter-ethnic marriage strategies, competition with dominant groups, and foreign colonial rule (Huang and Liu, 2016). These experiences of colonisation, marginalisation and land loss led most Indigenous Taiwanese to reside in remote mountainous areas in central and eastern Taiwan (Fig. 1), limiting their access to adequate healthcare (Huang and Liu, 2016). A long-term care (LTC) policy was implemented in 2007 and revised in 2017 to address the care needs of individuals with chronic conditions. To respond to the above-mentioned disparity in life expectancy, Indigenous people can access the
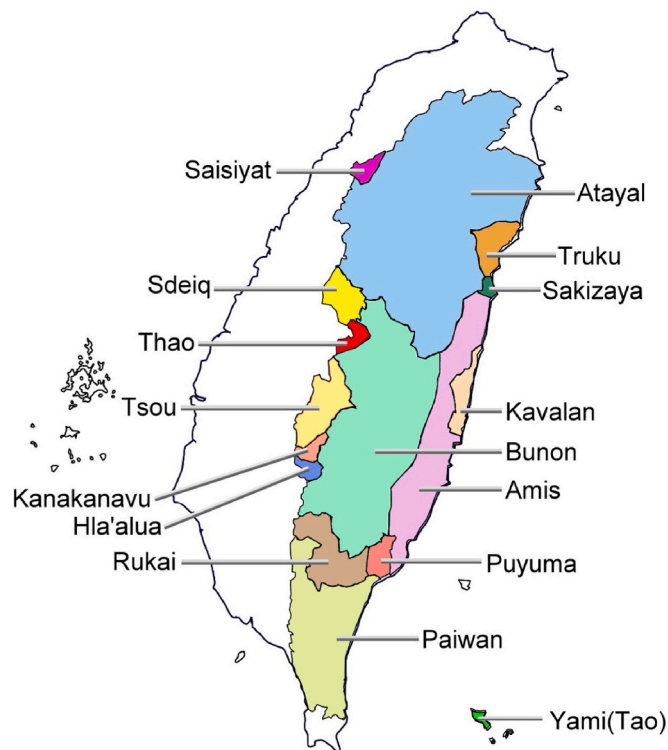
Fig. 1. Map of Indigenous populations' distribution in Taiwan. Note: This map, adapted from the Department of Household Registration (2023), illustrates the distribution of 16 officially recognised Indigenous populations in Taiwan. The Tsou population (coloured in pastel yellow) is the primary group I recruited for this focused ethnography.

LTC service ten years earlier (at age 55) than the general population (at age 65) (Ministry of Health and Welfare, 2016).

This article presents findings from a doctoral study elucidating the disparity in post-stroke recovery among stroke survivors from different sociocultural backgrounds (Liao, 2021). The study investigated dyads of stroke survivors and their family caregivers, providing insight into the post-stroke recovery trajectory. It was found that the biographical continuation of the dyads was embedded in their engagement in meaningful activities, the re-establishment of their identity through self-efficacy, and active participation in social environments (Liao et al., 2024). This article focuses on the varied statuses observed along the post-stroke recovery trajectory among mountain-based Indigenous, urban-based Indigenous and non-Indigenous groups. By contextualising the relationship between Indigenous people and their native lands, it highlights two key findings that address the persistent health disparity. First, challenges encountered during the recruitment process in this focused ethnography, notably engagement with people within the targeted context, reveal the invisibility of Indigenous identity within the LTC and administrative systems. Secondly, the findings show the barriers faced by Indigenous people when accessing healthcare in their situated communities. These findings illuminate the production and reproduction of health disparity for Indigenous people, as their profound attachment to their native lands has a dual impact on healthcare access. Native lands foster a favourable environment; however, the geographical limitations to accessing healthcare services hinder the potential for optimal post-stroke recovery. Distance from Indigenous lands weakens social support and access to economic resources, restricting individuals' ability to afford and pursue good health.

2. Background

2.1. Place and health

The influence of place on health has been explored in various aspects, from therapeutic landscapes (Gesler, 1992), medical geography (Kearns, 1993), and environmental gerontology (Rowles and Bernard, 2012), indicating that geographical and sociospatial factors can enhance and limit health outcomes (Kearns and Gesler, 1998). Following the concept of health geography, places embody time, space, meaning, and resources for livelihood, knowledge acquisition and social networks, all contributing to individual wellbeing in social theories (Bernard et al., 2007; Giddens, 1984). Place-patterned health disparities are rooted in the unequal distribution of resources (Macintyre and Ellaway, 2003). Giddens' structuration theory (1984) introduces the duality of structure, highlighting the mutual-constructed relationship between structure and individual agency. Social structure shapes resource distribution and individual behaviours, while individuals impact and reproduce the structure through their actions. In the context of health disparity, structural elements in a place influence individuals' ability to make active health-related decisions, perpetuating social inequalities into health inequalities (Bernard et al., 2007).

2.2. Indigenous health

Juan et al. (2016) investigated the correlation between mortality and ethnicity in 21 administrative locations in Taiwan. Indigenous people faced higher risks of homicide, car accidents, tuberculosis, and alcohol-related diseases such as peptic ulcer, chronic liver disease and cirrhosis. These diseases were most common in locations with diverse ethnic populations (Juan et al., 2016). Indigenous people suffer more from chronic illnesses and have relatively limited access to adequate healthcare (Denison et al., 2023; Quigley et al., 2019). A national linkage study by Denison et al. (2023) found that Māori people experience worse post-stroke outcomes, including increased mortality, changes in residence and greater job loss due to young stroke onset, compared to New Zealanders of European origin. Quigley et al. (2019) found that Indigenous stroke survivors usually leave their communities to access stroke care, then forego rehabilitation potential to return to their native communities due to inadequate communication and limited home and community care. These facts highlight that universal healthcare coverage does not guarantee equitable healthcare access.

2.3. Place-based services for Indigenous communities

Place-based healthcare that connects the care continuum and collectively addresses service delivery, healthcare access and cultural awareness is crucial for Indigenous populations. To address 'coverage without access' issues in remote areas, Taiwan launched the Integrated Delivery System (IDS) in 1999. IDS aimed to improve healthcare by fostering collaborations between hospitals and local public health centres in mountainous areas and offshore islands. Hospitals deployed medical personnel to provide fixed-site or mobile healthcare services at local health centres (National Health Insurance Administration, 2022). Despite improvements in medical and long-term access, higher yearly hospital visits per person in remote areas show ongoing health disparities among Indigenous communities (Lee et al., 2019).

Understanding Indigenous perspectives on healthcare quality is crucial for addressing their needs within the current healthcare system. Armstrong et al. (2021) conducted a trial, establishing the place-based coordinator role across metropolitan and rural regions in order to enhance rehabilitation services for Aboriginal Australians following stroke and brain injury. Their findings emphasised coordinated healthcare within Aboriginal communities to provide ongoing support, particularly after hospital discharge. Culturally responsive care requires further development, as suggested by Eustace et al. (2023), who

explored Māori stroke survivors' experiences with speech-language therapy in New Zealand. Participants perceived improved communication and community connections but noted limitations in Western-dominated healthcare. A Māori approach, cultural elements and more Māori health workers are expected to enhance therapy benefits and support Indigenous communities. This highlights the importance of healthcare supply and the intricate interactions between health and place, which are imbued with meaning for both individuals and Indigenous communities.

Place, as a relational space, is intertwined with demographic and sociocultural factors that impact people's health and healthcare access, extending beyond the healthcare system (Brown, 2018). Few researchers have explored the experiences of Indigenous people in Taiwan regarding their engagement with healthcare services in their native lands or relocated residences. Therefore, research is needed to contextualise how place affects the health and lives of Indigenous people with chronic conditions.

3. Methodology

A focused ethnography was adopted to explore the perspectives of stroke survivors and their family caregivers in dyads from Indigenous and non-Indigenous populations in different geographical regions in Taiwan. This doctoral study was conducted by the first author, LZY, with guidance from her PhD supervisors, the co-authors. Over nine months of on-site fieldwork, LZY resided in the communities and developed an understanding of the populations of interest (Madden, 2017; O'Reilly, 2012). Being active in the research environment, LZY recorded her awareness and practices of reflexivity throughout the study in a reflexive diary, writing in the first person, to reflect on my (LZY) transition, tension, and mutual influences of viewpoints. Below, I explain my approach to the focused ethnography: (1) design with reflexivity considerations; (2) ethics application and ethical considerations; (3) reflection on ethnographic fieldwork and participant recruitment; and (4) data analysis through equal representation of perspectives of dyads from minority and mainstream groups.

3.1. Design with reflexivity considerations

Schon (2008) suggested that reflexivity represents individuals' conscious thoughts, revealing the theories they use while perceiving and acting in the world. Gobo and Molle (2016, p. 80) described reflexivity "*as the process of confronting and expecting to be, to a certain extent, biased by prejudice*". During this study, I interpreted reflexivity as the act of confronting biases and acknowledging potential influences stemming from my preconceptions and identity. Reflexivity was applied throughout the study to ensure quality and rigour.

Philosophically, I adopted a relativist ontology and social constructionism as lenses to help me think reflexively and systematically (Seale, 1999). Relativist ontology asserts that reality is composed of finite subjective experiences and nothing exists independently of thoughts and experiences (Denzin and Lincoln, 2005). In this sense, the functions and meanings of LTC services are contingent upon the individuals who hold them, including those who deliver or utilise LTC services. Furthermore, I valued not only individual experiences but also the way that a context or a community facilitates or impedes people's engagement with care services. I viewed Indigenous and non-Indigenous people's experiences of LTC utilisation post-stroke as socially constructed meanings that should be understood in the sustained social (inter)action of their particular context or culture.

Methodologically, I acknowledged the inevitable limits and preconceptions attributable to my background as a nurse and my ethnic identity as non-Indigenous. Therefore, I could only understand Indigenous people's experiences by becoming part of their lives. I adopted focused ethnography as it allowed me to explore a specific culture or social phenomenon through prolonged engagement with people of

interest within the targeted context. I spent nine months (August 2018 to April 2019) in three fieldwork sites and recruited 12 dyads of stroke survivors and family caregivers from non-Indigenous, mountain-based Indigenous and urban-based Indigenous groups (four dyads from each group). Table 1 outlines the fieldwork sites and inclusion and exclusion criteria for participants.

I was aware that perspectives from the various social actors in LTC delivery needed to be adequately presented and balanced. Non-participant observations (n = 48) and semi-structured interviews (n = 24) allowed me to explore stroke survivors' (n = 12) and family caregivers' (n = 12) post-stroke lives in their natural state. Non-participant observations, following the duration of LTC delivery and usually ranging from 1 to 1.5 h, enabled me to understand the interaction between care providers and recipients and revealed contextualised data in meaning-constructed situations, usually at home or in the rehabilitation centre. The use of semi-structured interviews, normally lasting 45 min, allowed the exploration of specific questions arising from the non-participant observations in a private and uninterrupted environment.

Given my background as a nurse from the majority non-Indigenous population, I wrote myself into the field and kept a reflexive diary, recording my positionality, in order to note my inevitable subjective perspective. The tension between these insider and outsider positions enabled me to question, engage with and distance myself from the data. Switching positions between insider and outsider gave me a more comprehensive understanding of human phenomena by synthesising different perspectives (Coffey, 2018). Regarding data management and analysis, equal representation of participants from the mainstream (four non-Indigenous dyads) and minority groups (four urban-based Indigenous dyads and four mountain-based Indigenous dyads) was applied in code mapping and data visualisation. I analysed both common and deviant cases in order to identify factors that could influence the findings, avoiding making any view over-representative and ensuring that the individual dyads' stories were valued and presented.

Theoretically, the reflexivity was actualised by "*allowing room for elements other than the problematization of text-authority relations, and to avoid the latter dominating*" (Alvesson and Sköldberg, 2000, p. 249). I, the first author, applied abductive reasoning by using biographical disruption (Bury, 1982), status passage theory (Glaser and Strauss, 2011) and structuration theory (Giddens, 1984) to interpret data and develop the analysis. My co-authors, as peer debriefers, offered neutral viewpoints to mitigate potential researcher bias. Given the small population and close-knit nature of Indigenous tribes, alongside the ethical concern of preventing participant identification, we validated analytical findings and addressed uncertainties with individual participants during the concurrent data collection and analysis.

3.2. Ethics application and ethical consideration

Ethics review was sought from three institutions: the Research Ethics Committee (REC) at the University of Edinburgh, UK; the REC at National Cheng Kung University, Taiwan; and the Council of Indigenous People (COIP) in Taiwan. COIP is the authority responsible for Indigenous affairs and requires all studies concerning Indigenous populations to be reported to them.

The ethics boards in Taiwan focused on the research team's awareness of cultural sensitivity and procedures in order to ensure that Indigenous participants were well-informed before participating. Before submitting the ethical approvals in Taiwan, I established connections with tribal communities through the local health centre; I participated in local health screening events to gain a deeper understanding of the context and Indigenous populations' engagement in health-related activities. I sought to address ethical considerations about: (1) assurance of Indigenous rights; (2) cultural sensitivity of leaflets and consent form; (3) ongoing, repeated consent; and (4) confidentiality.

COIP inquired about the research purpose and data collection methods, specifically whether the research involved Indigenous land

Table 1
Characteristics of participants and fieldwork communities.

Participant group	Number of dyads	Demographic features	Characteristics of fieldwork site	Inclusion criteria for dyads	Exclusion criteria for dyads
Mountain-based Indigenous group	4	Ethnic identity: qualified as Indigenous Peoples [a] Residence: in an Indigenous administrative region [b]	4 dyads from mountain-based Indigenous administrative township	Stroke survivor and main carer Aged >20 years [c] Receiving LTC service in community-dwelling settings Able to communicate verbally Without cognitive impairment	Either member of a dyad declined to participate or had experienced mental disorder
Urban-based Indigenous group	4	Ethnic identity: qualified as Indigenous Peoples [a] Residence: not in an Indigenous administrative region [b]	2 dyads from post-disaster community 2 dyads from non-Indigenous administrative region in urban plains		
Non-Indigenous group	4	Ethnic identity: not qualified as Indigenous Peoples [a] Residence: not in an Indigenous administrative region [b]	4 dyads from non-Indigenous administrative region in urban plains		

Note: [a] Qualification of Mountain Region Indigenous Peoples or Plain Region Indigenous Peoples is based on the Status Act For Indigenous Peoples (Council of Indigenous Peoples, 2001).
[b] Recognition of Indigenous administrative regions is based on the Council of Indigenous Peoples (2002).
[c] 20 was the legal age of majority before 2023 in Taiwan; it became 18 in 2023.

enclosure, which might exploit their livelihoods. I also confirmed no planned profitability. They explained that if it became profitable, a consensus on profit sharing with Indigenous tribes would be necessary. Given that Indigenous languages are prevalent in tribal communities, information leaflets and informed consent were prepared in both Mandarin and the Indigenous language, as required by the ethics board. To ensure cultural sensitivity, a qualified local interpreter assisted with document translation and, when necessary, read the materials to the participants. No language barriers requiring an interpreter arose during the fieldwork, as all participants could communicate effectively in Mandarin. Both written and verbal consent were obtained before data collection. The consent procedure was iterative, constantly ensuring participants' willingness and suitability. Data were anonymous and stored on a password-protected computer, with hard copies stored in a locked individual office. To maintain the integrity of care relationships and future care quality, no comments from care users were disclosed to care providers.

3.3. Reflection on ethnographic fieldwork and participant recruitment

This study recruited 12 dyads of stroke survivors and family caregivers from Indigenous, urban-based and non-Indigenous populations. Each group consisted of four dyads (Table 2). The participants were initially recruited through purposive sampling and subsequently through snowball sampling. My reflexive diary recorded access and recruitment challenges, especially the difficulty in identifying the required number of urban-based Indigenous dyads. I reflected on the person-place relationship that supported or impeded participant recruitment along three pathways: (1) bond between Indigenous identity and land for mountain-based Indigenous participants; (2) proximity to neighbourhood resources for non-Indigenous participants; (3) social ties for urban-based Indigenous participants.

3.3.1. Bond of Indigenous identity with land for mountain-based Indigenous participants

I selected one of the Indigenous regions, which "*refer[red] to areas approved by the Executive Yuan upon application made by the central Indigenous authority where Indigenous peoples have traditionally inhabited, featuring the Indigenous history and cultural characteristics*" according to *The Indigenous Peoples Basic Law* (Laws and Regulations Database, 2018). Under the legislative act in the Indigenous jurisdiction, Indigenous identity was rooted in Indigenous lands, which made minority groups visible and identifiable within communities.

Table 2
Biographical details of the participants.

Characteristics of fieldwork site	Code	Pseudonym	Role	Relationship	Age	Time post-stroke
Mountain-based Indigenous population						
MIAT	A1	Andrew	S	Husband	73	4 years
		Georgia	F	Wife	72	–
MIAT	A2	Bridget	S	Mother	84	3 years
		Deborah	F	Daughter	61	–
MIAT	A3	Yuri	S	Mother	83	7 years
		Molly	F	Daughter-in-law	40	–
MIAT	A4	Novia	S	Mother	76	3 years
		Beryl	F	Daughter-in-law	38	–
Urban-based Indigenous population						
PC	U1	Linda	S	Younger sister	52	2 years
		Prima	F	Elder sister	57	–
PC	U2	Ella	S	Wife	62	3 years
		Bob	F	Husband	63	–
NARU	U3	Hank	S	Father	64	6 years
		Ivy	F	Daughter	30	–
NARU	U4	Dora	S	Cohabitant (female)	47	4 years
		Maxwell	F	Cohabitant (male)	58	–
Non-Indigenous population						
NARU	N1	Julian	S	Husband	43	4 years
		Ginger	F	Wife	36	–
NARU	N2	Hobart	S	Husband	68	7 years
		Clara	F	Wife	64	–
NARU	N3	Leonard	S	Father	75	16 years
		Louis	F	Son	50	–
NARU	N4	Driscoll	S	Husband	79	7 years
		Delia	F	Wife	71	–

Note: *S* Stroke survivor, *F* Family caregiver, *MIAT* Mountain-based Indigenous administrative township, *PC* Post-disaster community, *NARU* Non-Indigenous administrative region in urban plains.

I accessed Indigenous regions after obtaining approval from the gatekeeper organisations: the Healthcare Bureau and the COIP. I met potential mountain-based Indigenous participants by accompanying an LTC supervisor when she renewed contracts with her clients. I was introduced to five care providers who agreed I could observe them delivering LTC services; I accompanied the care providers when they delivered services at stroke survivors' homes. After observing LTC practices in eight households, I recruited four dyads of stroke survivors and family caregivers for individual interviews.

3.3.2. Proximity to neighbourhood resources for non-Indigenous participants

To recruit non-Indigenous participants, I sought support from an LTC manager running an LTC station in an urban plain community. The manager told me that some stroke survivors regularly attended the neighbourhood LTC station and rehabilitation programmes. I attended the healthcare facilities three days a week to conduct initial non-participant observation of potential research candidates. This approach allowed me to become familiar with the stroke survivors, assess their eligibility for individual interviews, and conduct further observations in residential settings.

The mountain-based Indigenous and non-Indigenous groups that were purposively sampled depended on proximity to healthcare infrastructure such as LTC stations and rehabilitation centres. Infrastructure can link care needs and supplies co-present in the community. These groups' engagement with healthcare resources built an identity in the administrative system, which generated social relationships that enabled me to identify them through gatekeepers and employ on-site fieldwork at the healthcare facilities.

3.3.3. Social ties enabling recruitment among urban-based Indigenous group

In contrast to immersing myself in geographical environments and healthcare facilities, the access and recruitment processes for urban-based Indigenous participants were relatively individual and discrete: I contacted each dyad individually. I relied significantly on connections made through social relationships and acquaintances built during long-term fieldwork. Two dyads were recruited from a post-disaster resettlement community in a township adjacent to the Indigenous administrative region where I recruited the mountain-based Indigenous dyads. This community was established to provide housing for people whose houses had been destroyed by a typhoon in 2009. The other two dyads were recruited separately from urban plain communities through the connection of social acquaintances and an LTC manager. Reflecting on the recruitment process, urban-based Indigenous people were notably more difficult to identify. They often remain invisible within the administrative support system due to their weaker social ties with tribal members and limited proximity to healthcare resources.

3.4. Data analysis

I analysed 48 observational fieldnotes and 24 interview transcripts. Each set of fieldnotes, 10 to 18 pages long, includes summaries of care services and participants involved, detailed interaction scenarios observed, and outlines of additional questions to probe further. After the interviews were transcribed, excerpts for further analysis were translated into English and uploaded to NVivo 12 Pro for collaborative analysis (Lumivero, 2017). The analytical processes comprised initial descriptive coding of the empirical data, focused coding, code mapping for emerging phenomena, and theorising data through abductive reasoning. Abductive reasoning involved three steps. First, a post-stroke recovery trajectory emerged as the codes representing the dyads' self-perceived life status were arrayed in sequence. We conceptualised the post-stroke recovery trajectory using biographical disruption (Bury, 1982) and status passage theory (Glaser and Strauss, 2011). A comprehensive explanation of how theory and narratives mutually illuminated

the dyads' biographical continuation in recovery is presented in Liao et al. (2024). Secondly, I aimed to ascertain where each individual dyad was situated along the post-stroke recovery trajectory. I mapped the participants from mountain-based, urban-based Indigenous and non-Indigenous contexts on the trajectory (Fig. 2) to visualise and explore their immediate post-stroke statuses. The visual representation shows that the varied distribution among the three participant groups was associated with 'context' and/or 'place'. Giddens (1984) indicated that context connects the most intimate and detailed components of interaction to the much broader properties of the institutionalisation of social life. The duality of structure suggests that structuration is an ongoing process characterised by structural properties. Human actions occur in structures while human agency sustains and reproduces the structure (Giddens, 1984). Thirdly, we recontextualised the data by extracting it from the original context and organising codes and categories into a concept map (Fig. 3), adapted from the concept of time-space-power outlined in structuration theory (Giddens, 1984). I framed the post-stroke context within the post-stroke recovery trajectory (lived time), sense of place (lived space), and engagement with LTC services influenced by contextual factors (power of social relations). The abductive reasoning process negotiated the emic perspective from narratives and the etic perspective from theories, addressing the semantic gaps and enhancing my theoretical understanding of the data regarding 'context' and 'place' and their impact on healthcare access.

4. Findings

The post-stroke recovery trajectory demonstrates that quality of recovery is contingent upon independence, identity re-establishment, and wellbeing through meaningful engagement, transitioning from biographical disruption to biographical continuation (Bury, 1982; Pallesen, 2014). Individual positions on this trajectory relate to place (where people live) and environmental contexts conducive to wellbeing. Fig. 2 suggests the non-Indigenous population achieved the highest recovery level, followed by the mountain-based Indigenous group, while the urban-based Indigenous group tended to recover least. I present the findings in three dimensions: (1) ways of defining places; (2) livelihood dependence; and (3) engagement with LTC services.

4.1. Ways of defining place

4.1.1. Sense of being home

The participants used home as a metaphor to describe their perceptions of their usual living environment. A home-like feeling was used to value and define a place. For example, Yuri, an Indigenous stroke survivor, was emotionally distressed after leaving her lifelong mountainous habitat to relocate to the urban plains with her daughter for post-stroke rehabilitation. She could not adapt to her new residence and eventually moved back to the mountains. Her family caregiver, Molly, recalled:

> *"After six months (living in the plains), my mother-in-law called and said, 'Do you guys intend to tie me up here and not bring me back?' [...] She said, 'it wasn't my own home'. This is possibly because she couldn't get used to the place. [...] After returning to the mountains, she went to the (tribal) cultural health station by herself regularly with my encouragements."* (Molly, Indigenous family caregiver, daughter-in-law)

This implies that kinship alone cannot guarantee a sense of home. Home also connects with physical environment, life stories and the psychological habitus of places. Yuri adapted to her changed body in a secure environment and engaged with the tribal cultural health station, a community-based LTC facility promoting physical activities and social interactions for older people. This shift helped her regain independence and facilitated her journey towards the identification state, to reclaim her social identity.
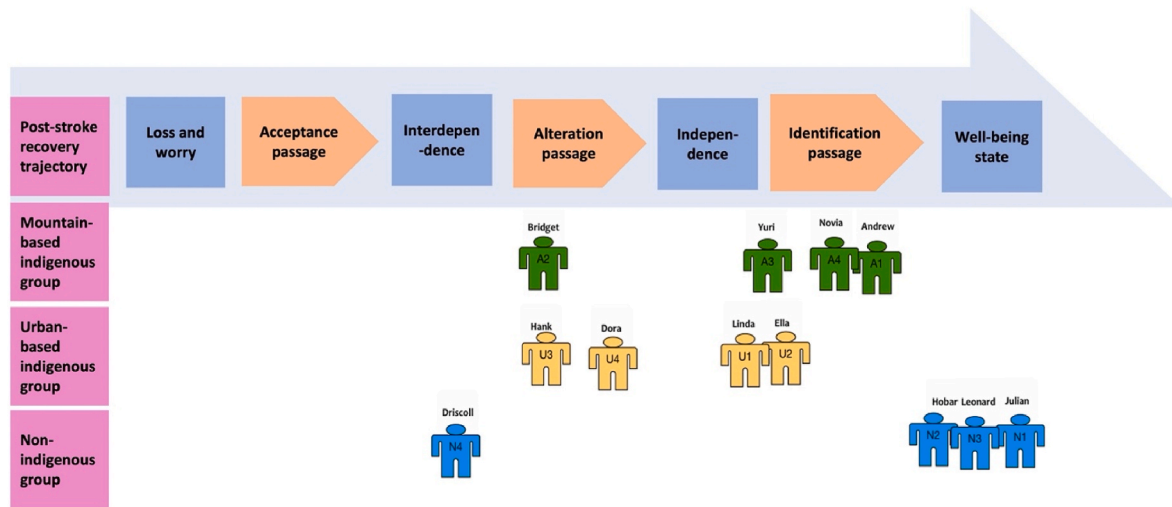
Fig. 2. Participants' distribution along the post-stroke recovery trajectory. Note: The blue square items represent mindsets, while the orange arrow items represent passages. The human icons indicate different recovery statuses after a stroke. The green, yellow, and blue human icons correspond to stroke survivors from the mountain-based Indigenous group, urban-based Indigenous group and non-Indigenous group respectively.
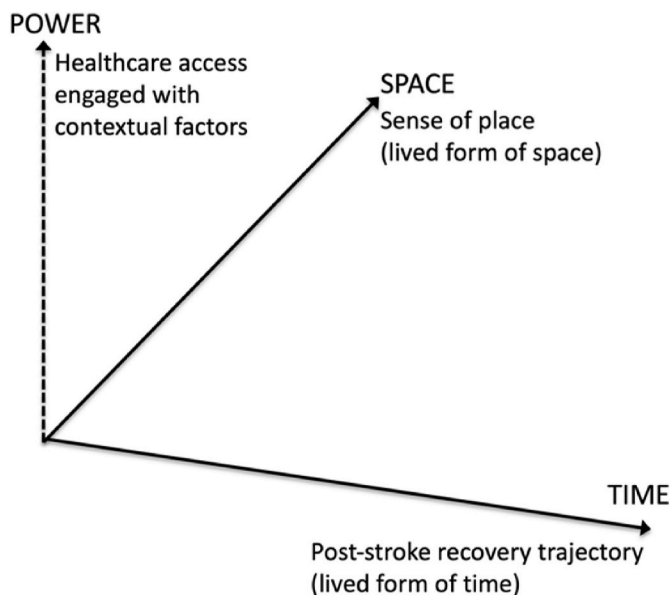

Fig. 3. Concept map of time-space-power. Note: Post-stroke recovery was interpreted as a lived form of time. The dyads' post-stroke life was shaped by their interactions with the LTC system and services available in their location, interpreted as a lived form of space. The concept of power appeared when social relations shifted, enabling me to explore where power was grounded, generated and manifested within the study context.

4.1.2. Ethnic and cultural symbols for Indigenous people

While home symbolises comfort and psychological familiarity within a situated environment, sense of place for Indigenous people expands from a home-like feeling to a psychological attachment to their tribal communities. Linda specified how she defined an environment:

> "I psychologically perceived it was better to go back to the mountain. I was able to hear clan members speak the Indigenous language. I felt I was doing well in the tribal environment because I could hear my own language." (Linda, urban-based Indigenous stroke survivor)

Corresponding to Linda's experiences, Novia, following a temporary relocation, found a more positive outlook on post-stroke life upon returning to her native lands. Isolation at home and lack of meaningful

engagement led to this decision. She recounted:

> "I need to exercise because I got sick. Sitting still there was doing nothing good. [...] I am pleased to chat with friends. I participate in activities every day on my own." (Novia, mountain-based Indigenous stroke survivor)

Novia's temporary move away from her native lands caused isolation and her eventual return. Interacting at the tribal cultural health station with tribal members, who shared similar ethnic and cultural characteristics, fostered friendships and attachments to meaningful places. This transition strengthened her sense of identity and consistent engagement in social activities, collectively signifying her advancement in the identification state.

Conversely, Indigenous participants relocating to urban areas maintained an attachment to their tribal environment and social group. They often felt detached from their urban residence due to their negotiation of Indigenous place identity with ethnic features. Linda, who had achieved independence, had a strong preference for the comfort of Indigenous surroundings and for staying in her native land.

4.2. Livelihood dependence

Sense of place is not only reflected in psychological attachment to native lands but also in dependence on the socioeconomic resources in those lands.

4.2.1. Decision about post-disaster resettlement location

Due to their geographical distribution within the mountain regions, mountain-based Indigenous populations are especially vulnerable to disasters such as typhoons, earthquakes and landslides, which destroy their residences. Many disaster-stricken households have relocated to either the mountain area or the urban plains adjacent to the Indigenous administrative township. Georgia explained her economic reasoning for relocating to the mountain area rather than the urban plains after a typhoon destroyed her lifelong residence:

> "The weather is cool, our livelihood is also based on [the] mountainous area, [I] find no reason to resettle in the plain area. [...] I am running BBQ and growing veggies here. If I have extra harvesting then I will sell it." (Georgia, Indigenous family caregiver, wife)

Andrew, formerly a harvesting labourer, became a grocery shop owner in his Indigenous community following his stroke. This transition made him financially self-sufficient, enabling him to manage living

expenses and healthcare costs alongside his wife, Georgia:

> *"I manage living costs with my wife together. I cover the LTC fee from my grocery sales. I pay my son when he helps restock."* (Andrew, Indigenous stroke survivor)

The native lands provided the dyad with a supportive environment for maintaining economic stability, enabling Andrew to find self-efficacy and re-establish social identity, driving his recovery towards the identification state.

4.2.2. Reasons of residential mobility

Indigenous sources of livelihood are connected to native lands. Prima depended on the mountain ecosystem to sustain her livelihood after relocating to the urban plains:

> *"During the bamboo harvesting season, I went back and forth (between mountain and plain lands) frequently. Sometimes, I stayed in a temporary tent for a few days [in the mountain area]."* (Prima, urban-based Indigenous family caregiver)

Indigenous people, whether in the mountainous regions or urban plains, are economically dependent on their native lands, which provide amenities and resources. Livelihood dependence on native lands influences crucial decision-making processes relating to residence arrangements. To ensure economic stability, Indigenous people frequently move between their current residences and native lands, leading to residential mobility.

4.2.3. Economic instability caused by limited access to Indigenous-specific welfare

Another factor in attachment to native lands is that social welfare for Indigenous people is usually centred on Indigenous administrative regions. Proximity to native lands impacts welfare access. In the Indigenous regions, clinic visits are exempt from co-payment; both Indigenous and non-Indigenous are eligible. In contrast, an urbanised Indigenous dyad, Dora and Maxwell, alternated between attending rehabilitation with a co-payment requirement and free lunches in the tribal cultural health station. Dora explained:

> *"I used to go there (rehabilitation centre) for exercising in the early morning. Maxwell worried about money, so (we) didn't go to rehabilitation. Also, (we are) worried about requiring paying 50 NTD (approx. 1 GBP each time). […] How to say … it's too exhausting."* (Dora, urban-based Indigenous stroke survivor)

Affordability influences access to adequate healthcare, contributing to Dora's slower recovery, despite her urban location being just a 3-min drive from the rehabilitation centre. My fieldwork observations revealed that increased distance from livelihood sources directly impacted the work opportunities and income of Indigenous people, potentially affecting healthcare affordability due to land ownership and derived profits from these possessions. The fieldnote on March 18, 2019 explained:

As far as I was aware, four dyads from the mountain-based Indigenous group held lands in the Indigenous region, using them for agriculture, hostels or tribal restaurants. *Regulations on Development and Management of the Lands Reserved for Indigenous People* (Laws and Regulations Database, 2019) safeguard their land rights, securing negotiation bases for utilisation and leasing. An informant clarified, *"non-Indigenous people intending to use land in Indigenous region must rent it from Indigenous people"*. During my fieldwork, I observed that Prima, an urbanised Indigenous caregiver, owned land in the Indigenous region. However, her caregiving role, requiring frequent travel between mountains and plains, postponed her plans for crops cultivation. Furthermore, the mountain-based Indigenous group and two urbanised Indigenous dyads living adjacent to the Indigenous region (Linda and Ella) appeared to have better economic stability for healthcare expenses and higher recovery levels than the other two urbanised Indigenous

participants (Hank and Dora). Hank and Dora, residing further away and detached from their native lands longer, had relatively less economic stability.

Economic disparities were also reflected in Indigenous groups' post-stroke recovery. These disparities derived from livelihood ties and access to welfare entitlements, including land rights and healthcare co-payment exemptions within the Indigenous jurisdiction. The findings indicate that Indigenous sense of place, including identity, attachment and dependence on native lands, links Indigenous economic prospects, healthcare access, and post-stroke recovery.

4.3. Engagement with LTC services

Indigenous identity and sociocultural attachment to native lands determine a favourable environment for post-stroke recovery within the tribal community. These sociocultural factors further shape the Indigenous individuals' perception, value, and engagement with LTC post-stroke.

4.3.1. Valuing healthcare services differently due to economic instability

Financial constraints influenced the valuing of LTC services. When asked about changes after receiving assistance from a residential care attendant, Hank responded:

> *"Change is only I can get fruit. No other thing has been changed. […] The influence is I can have a better mood for having the fruit. […] It's just … I felt that my wishes … my wishes have been fulfilled."* (Hank, urban-based Indigenous stroke survivor)

Inadequate healthcare access and social disadvantages contribute to Indigenous people's poorer health, as reflected in Dora and Hank's relatively late progression along the post-stroke recovery trajectory (Fig. 2) compared to non-Indigenous and mountain-based Indigenous participants. This is likely relevant to dislocation from livelihood and welfare sources.

4.3.2. Inaccessibility of equal quality healthcare

Due to their mountainous location, mountain-based Indigenous participants faced limitations in accessing infrastructure for maintaining health. Andrew explained that local transportation could not fulfil his rehabilitation needs:

> *"The pick-up point is at the police station. It doesn't come over here. […] There is only one car providing the service. Every month they call me and ask, 'Can you go (for rehabilitation)?' And I reply, 'No car.'"* (Andrew, Indigenous stroke survivor)

In contrast, stroke survivors in urban regions could access door-to-door shuttle services three times a week. Clara expressed satisfaction with the Rehabus service:

> *"The government operates long-term care with a person accompanying alongside and the Rehabus picking up and dropping off him at home every day. […] He waited in front of the shoe cabinet every morning. I felt relieved and secure."* (Clara, non-Indigenous family caregiver, wife).

Geographical location significantly affects access to LTC resources, influencing opportunities for quality recovery along the post-stroke trajectory.

4.3.3. Barriers to identifying care users

Identity linked to place also influences connectedness with identity in the administrative system. Physical detachment from native lands indicates a loss of social network, making Indigenous people invisible in the administrative support system. Bob explained that his wife was not identified as an eligible LTC user until a year after they had returned to the post-disaster resettlement community in the urban plains:

"After (being back in the community) a year, the health clinic came here. You know? Came to the community. The clinic in charge of this region told me, 'there is a shuttle bus comes to the community, do you want to send your wife for rehabilitation in hospital?'" (Bob, urban-based Indigenous family caregiver, husband)

The Indigenous population are particularly place-bound, as they are disadvantaged when relocated from their native lands. Moving between native lands and urban plains disrupts their connection with the healthcare system, leading to limited access to health resources. Their invisibility is also reflected in the challenges I encountered, articulated above, in recruiting Indigenous participants residing in urban plains.

5. Discussion

The post-stroke trajectory of Indigenous individuals is influenced by their connection to native lands, defined by place attachment, place dependence and place identity (Gokce and Chen, 2017). This Indigenous sense of place, closely intertwined with kinship and social networks, economic stability and visibility within healthcare systems, profoundly impacts their health and wellbeing (Alaazi et al., 2015). Native lands encompass cultural geography, evoke a strong sense of belonging and reinforce identity through shared cultural symbols such as language, festive rituals and narratives during gatherings (Kingsley et al., 2018). Culturally supportive environments foster therapeutic landscapes where built environments, social interactions and cultural symbols contribute to a healing sense of place (Alaazi et al., 2015). These elements are crucial for the emotional, physical and spiritual wellbeing of Indigenous older adults (Parrella et al., 2022). Distance from native lands limits family and social networks, leading to increased risk of poor mental health and isolation and hindering the connection of cultural identity (Goodman et al., 2019).

Indigenous native lands hold social and economic capital, which is crucial for individuals' psychological and economic stability (Browne-Yung et al., 2013). Distance from native lands disconnects them from resources, affecting access to welfare and creating economic barriers to good healthcare (Liddell and Lilly, 2022). This is evident when urbanised Indigenous individuals in financial hardship prioritise immediate social support over potential health improvement when evaluating services. Indigenous residential mobility, often driven by educational or job opportunities, causes movements between native habitats and urban plains (Snyder and Wilson, 2015). Their agency for a better life paradoxically disconnects Indigenous individuals from healthcare and welfare systems, highlighting inherent structural barriers to mobility, economic independence and pursuit of health when they live away from their tribal communities (Wang and Wang, 2019).

Social rights and welfare are often tied to formal citizenship registered within a specific jurisdiction (Bernard et al., 2007). Proximity to local resources is vital, especially for place-bound populations such as disabled or older people, exemplifying the link between individual identity and place. Economic dependence and sociocultural connection to native lands engender attachment to mountain regions, causing detachment and identity loss in urban communities. Urbanised Indigenous people can become unidentifiable and often lost in healthcare systems due to residential mobility, signifying the mediating role of place attachment in Indigenous identity (Hernández et al., 2007). The interwoven relationship between identity, health and place highlights the production and reproduction of health disparities through both social structure and individual agency (Giddens, 1984). Indigenous cultural identity further impacts control and opportunities for social, economic and welfare pursuits towards health (Verbunt et al., 2021). This suggests the need to extend our focus beyond widely discussed social determinants and address the interconnection among geographical, social and cultural determinants of health from an upstream perspective (Frohlich and Potvin, 2010).

To mitigate potential biases in mainstream healthcare, post-stroke rehabilitation should emphasise the cultural and social factors in stroke survivors' sense of place, aiding their adaptation to changed bodies and identities in living environments (Nanninga et al., 2015). Tribal cultural health stations support active community engagement and ageing in place for Indigenous older adults, facilitated by local Indigenous healthcare staff. This suggests expanding the presence of these facilities in urban regions, prioritising cultural awareness and service alignment with Indigenous regions. Additionally, collaboration with Indigenous community networks should be strengthened and demographic and LTC data linked to track these highly mobile populations. Future research should explore how urban Indigenous older adults establish a sense of place and utilise tribal culture health stations to gain comprehensive perspectives from this vulnerable group.

Ontologically, this focused ethnography reveals the connection between Indigenous health disparities and sense of place in native lands. Epistemologically, researchers can approach Indigenous health from the duality of structure and agency (Giddens, 1984), as geographically patterned health disparities result from social inequalities and cultural determinants rooted in resource distribution in social structures. Methodologically, bringing categorical properties in places and contextual milieus together could strengthen research design for a more comprehensive perspective. In research practice, place-specific exploration helps clarify the complexity of health disparities, as wider spatial indicators usually aggregate various social factors from economic, cultural and institutional domains.

6. Conclusion

Indigenous people's health is linked to their native lands, which shape their sense of place and play a crucial role in determining healthcare access. Distance from native lands weakens the Indigenous sense of place, as cultural symbols and social networks contribute to Indigenous individuals' wellbeing. The interconnection among identity, place and resources impacts the economic stability and visibility of urbanised Indigenous people when accessing health. They have less access to quality healthcare and welfare support due to structural barriers. Therefore, expanding Indigenous-specific community facilities staffed with Indigenous healthcare workers could facilitate access to essential resources for broader urban beneficiaries.

CRediT authorship contribution statement

Zih-Yong Liao: Writing – review & editing, Writing – original draft, Visualization, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Susanne Kean:** Validation, Supervision, Conceptualization. **Elaine Haycock-Stuart:** Validation, Supervision, Conceptualization.

Declaration of competing interest

None.

Data availability

The authors do not have permission to share data.

This study would not have been possible without their kindness and generosity.

References

Alaazi, D.A., Masuda, J.R., Evans, J., Distasio, J., 2015. Therapeutic landscapes of home: exploring indigenous peoples' experiences of a housing first intervention in winnipeg. Soc. Sci. Med. 147, 30–37. https://doi.org/10.1016/j.socscimed.2015.10.057.

Alvesson, M., Sköldberg, K., 2000. Reflexive Methodology: New Vistas for Qualitative Research. Sage, London.

Armstrong, E., Mccoy, K., Clinch, R., Merritt, M., Speedy, R., Mcallister, M., Heine, K., Ciccone, N., Robinson, M., Coffin, J., 2021. The development of aboriginal brain injury coordinator positions: a culturally secure rehabilitation service initiative as part of a clinical trial. Prim. Health Care Res. Dev. 22, e49. https://doi.org/10.1017/S1463423621000396.

Bernard, P., Charafeddine, R., Frohlich, K.L., Daniel, M., Kestens, Y., Potvin, L., 2007. Health inequalities and place: a theoretical conception of neighbourhood. Soc. Sci. Med. 65, 1839–1852. https://doi.org/10.1016/j.socscimed.2007.05.037.

Brown, T.H., 2018. Racial stratification, immigration, and health inequality: a life course-intersectional approach. Soc. Forces 96, 1507–1540. https://doi.org/10.1093/sf/soy013.

Browne-Yung, K., Ziersch, A., Baum, F., Gallaher, G., 2013. Aboriginal Australians' experience of social capital and its relevance to health and wellbeing in urban settings. Soc. Sci. Med. 97, 20–28. https://doi.org/10.1016/j.socscimed.2013.08.002.

Bury, M., 1982. Chronic illness as biographical disruption. Sociol. Health Illness 4, 167–182. https://doi.org/10.1111/1467-9566.ep11339939.

Coffey, A., 2018. Doing Ethnography. Sage, London.

Council of Indigenous Peoples, 2001. Laws and Regulations Database: Status Act for Indigenous Peoples [Online]. Available: https://law.moj.gov.tw/ENG/LawClass/LawAll.aspx?pcode=D0130001. (Accessed 11 May 2023).

Council of Indigenous Peoples, 2002. Laws and Regulations Retrieving System: Regulation of Indigenous Administrative Regions [Online]. Available: https://law.apc.gov.tw/LawContent.aspx?id=GL000076. (Accessed 11 May 2023).

Denison, H.J., Corbin, M., Douwes, J., Thompson, S.G., Harwood, M., Davis, A., Fink, J. N., Barber, P.A., Gommans, J.H., Cadilhac, D.A., Levack, W., Mcnaughton, H., Kim, J., Feigin, V.L., Abernethy, V., Girvan, J., Wilson, A., Ranta, A., 2023. Ethnic differences in stroke outcomes in Aotearoa New Zealand: a national linkage study. Int. J. Stroke 18, 663–671. https://doi.org/10.1177/17474930231164024.

Denzin, N.K., Lincoln, Y.S., 2005. Introduction: the discipline and practice of qualitative research. In: Denzin, N.K., Lincoln, Y.S. (Eds.), The SAGE Handbook of Qualitative Research. Sage, California, pp. 1–32.

Department of Household Registration, 2023. Statistics- County and City Indigenous Population by Identity and Ethnicity [Online]. Available: https://www.ris.gov.tw/app/portal/346. (Accessed 11 September 2023).

Eustace, M., Mcgarr, K., Theys, C., 2023. Māori aspirations following stroke: a pathway forward for the speech-language therapy field. Aphasiology 1–24. https://doi.org/10.1080/02687038.2023.2170695.

Frohlich, K.L., Potvin, L., 2010. Commentary: structure or agency? The importance of both for addressing social inequalities in health. Int. J. Epidemiol. 39, 378–379. https://doi.org/10.1093/ije/dyp372.

Gesler, W.M., 1992. Therapeutic landscapes: medical issues in light of the new cultural geography. Soc. Sci. Med. 34, 735–746. https://doi.org/10.1016/0277-9536(92)90360-3.

Giddens, A., 1984. The Constitution of Society: Outline of the Theory of Structuration. Polity Press, Cambridge.

Glaser, B.G., Strauss, A.L., 2011. Status Passage. Routledge, London.

Gobo, G., Molle, A., 2016. Doing Ethnography. Sage, London.

Gokce, D., Chen, F., 2017. Sense of place in the changing process of house form: case studies from Ankara, Turkey. Environ. Plan. B Urban Anal. City Sci. 45, 772–796. https://doi.org/10.1177/0265813516686970.

Goodman, A., Snyder, M., Wilson, K., Whitford, J., 2019. Healthy spaces: exploring urban Indigenous youth perspectives of social support and health using photovoice. Health Place 56, 34–42. https://doi.org/10.1016/j.healthplace.2019.01.004.

Hernández, B., Carmen Hidalgo, M., Salazar-Laplace, M.E., Hess, S., 2007. Place attachment and place identity in natives and non-natives. J. Environ. Psychol. 27, 310–319. https://doi.org/10.1016/j.jenvp.2007.06.003.

Huang, S.-M., Liu, S.-H., 2016. Discrimination and incorporation of Taiwanese indigenous Austronesian peoples. Asian Ethn. 17, 294–312. https://doi.org/10.1080/14631369.2015.1112726.

Juan, S.-C., Awerbuch-Friedlander, T., Levins, R., 2016. Ethnic density and mortality: aboriginal population health in Taiwan. Publ. Health Rev. 37, 1–8. https://doi.org/10.1186/s40985-016-0028-1.

Kearns, R.A., 1993. Place and health: towards a reformed medical geography*. Prof. Geogr. 45, 139–147. https://doi.org/10.1111/j.0033-0124.1993.00139.x.

Kearns, R., Gesler, W.M., 1998. Putting Health into Place: Landscape, Identity, and Well-Being. Syracuse University Press, New York.

Kingsley, J., Munro-Harrison, E., Jenkins, A., Thorpe, A., 2018. "Here we are part of a living culture": understanding the cultural determinants of health in Aboriginal

gathering places in Victoria, Australia. Health Place 54, 210–220. https://doi.org/10.1016/j.healthplace.2018.10.001.

Laws and Regulations Database, 2018. The Indigenous Peoples Basic Law [Online]. Available: https://law.moj.gov.tw/ENG/LawClass/LawAll.aspx?pcode=D0130003. (Accessed 19 April 2023).

Laws and Regulations Database, 2019. Regulations on Development and Management of the Lands Reserved for Indigenous People [Online]. Available: https://law.moj.gov.tw/ENG/LawClass/LawAll.aspx?pcode=D0060026. (Accessed 7 June 2023).

Lee, Y.T., Lee, Y.H., Kaplan, W.A., 2019. Is Taiwan's National Health Insurance a perfect system? Problems related to health care utilization of the aboriginal population in rural townships. Int. J. Health Plann. Manag. 34, e6–e10. https://doi.org/10.1002/hpm.2653.

Liao, Z.-Y., Haycock-Stuart, E., Kean, S., 2024. Biographical continuation: recovery of stroke survivors and their family caregivers in Taiwan. Prim. Health Care Res. Dev. 25, e2 https://doi.org/10.1017/S1463423623000610.

Liao, Z.-Y., 2021. Ph.D., Experiences of Receiving Long-Term Care Services Post Stroke from the Perspectives of Indigenous and Non-indigenous People in the Taiwanese Community: a Focused Ethnographic Study. The University of Edinburgh.

Liddell, J.L., Lilly, J.M., 2022. "There's so much they don't cover:" Limitations of healthcare coverage for Indigenous women in a non-federally recognized tribe. SSM - Qualitative Research in Health 2, 100134. https://doi.org/10.1016/j.ssmqr.2022.100134.

Lin, C.-Y., Hung, H.-J., Chung, C.-J., Huang, C.-T., Wu, T.-N., Chen, C.-Y., 2021. Ethnic disparity in metabolic syndrome and related obesity and health behavior: a community study in Taiwan. Diabetol. Metab. Syndrome 13, 134. https://doi.org/10.1186/s13098-021-00751-3.

Lumivero, 2017. NVivo (Version 12 Pro). www.lumivero.com.

Macintyre, S., Ellaway, A., 2003. Neighbourhoods and health: an overview. In: Kawachi, I., Berkman, L.F. (Eds.), Neighbourhoods and Health. Oxford University Press, New York.

Madden, R., 2017. Being Ethnographic: A Guide to the Theory and Practice of Ethnography. Sage, London.

Ministry of Health and Welfare, 2016. The Ten-Year Long-Term Care Plan 2.0 Prospectus [長期照顧十年計畫2.0（106~115年）(核定本)] [Online]. Taipei: MOHW. Available: https://1966.gov.tw/LTC/cp-4001-42414-201.html. (Accessed 17 February 2023).

Ministry of the Interior, 2019. Statistics: Life Tables [Online]. Available: https://www.moi.gov.tw/english/cl.aspx?n=7662. (Accessed 5 June 2023).

Ministry of the Interior, 2023. Statistics- Monthly Bulletin of Interior Statistics [Online]. Available: https://www.moi.gov.tw/english/cl.aspx?n=7665. (Accessed 8 September 2023).

Nanninga, C.S., Meijering, L., Schönherr, M.C., Postema, K., Lettinga, A.T., 2015. Place attachment in stroke rehabilitation: a transdisciplinary encounter between cultural geography, environmental psychology and rehabilitation medicine. Disabil. Rehabil. 37, 1125–1134. https://doi.org/10.3109/09638288.2014.955136.

National Health Insurance Administration, 2022. Integrated Delivery System (IDS Programme) [Online]. Available: https://www.nhi.gov.tw/Content_List.aspx?n=16DF993B07D4479F&topn=4864A82710DE35ED. (Accessed 10 September 2023).

O'Reilly, K., 2012. Ethnographic Methods. Routledge, Abingdon, Oxon.

Pallesen, H., 2014. Body, coping and self-identity. A qualitative 5-year follow-up study of stroke. Disabil. Rehabil. 36, 232–241. https://doi.org/10.3109/09638288.2013.788217.

Parrella, A., Pearson, O., Davy, C., Barrie, H., Mott, K., Morey, K., D'angelo, S., Sambo, R., Aitken, R., Franks, C., Canuto, K., Brown, A., Braunack-Mayer, A., 2022. Understanding culturally safe aged care from the perspectives of older Aboriginal Australians in rural and remote communities. Health Promot. J. Aust. 33, 566–575. https://doi.org/10.1002/hpja.541.

Quigley, R., Mann, J., Robertson, J., Bonython-Ericson, S., 2019. Are we there yet? Exploring the journey to quality stroke care for Aboriginal and Torres Strait Islander peoples in rural and remote Queensland. Rural Rem. Health 19, 4850–4859. https://doi.org/10.22605/rrh4850.

Rowles, G.D., Bernard, M., 2012. Environmental Gerontology: Making Meaningful Places in Old Age. Springer, New York.

Schon, D.A., 2008. The Reflective Practitioner: How Professionals Think in Action. Basic Books, New York.

Seale, C., 1999. The Quality of Qualitative Research. Sage, London.

Snyder, M., Wilson, K., 2015. "Too much moving…there's always a reason": understanding urban Aboriginal peoples' experiences of mobility and its impact on holistic health. Health Place 34, 181–189. https://doi.org/10.1016/j.healthplace.2015.05.009.

United Nations, 2018. Promoting Inclusion through Social Protection: Report on the World Social Situation 2018. United Nations publication, New York.

Verbunt, E., Luke, J., Paradies, Y., Bamblett, M., Salamone, C., Jones, A., Kelaher, M., 2021. Cultural determinants of health for Aboriginal and Torres Strait Islander people – a narrative overview of reviews. Int. J. Equity Health 20, 181. https://doi.org/10.1186/s12939-021-01514-2.

Wang, J.-H., Wang, S.-Y., 2019. Indigenous social policy and social inclusion in Taiwan. Sustainability 11, 3458. https://doi.org/10.3390/su11123458.